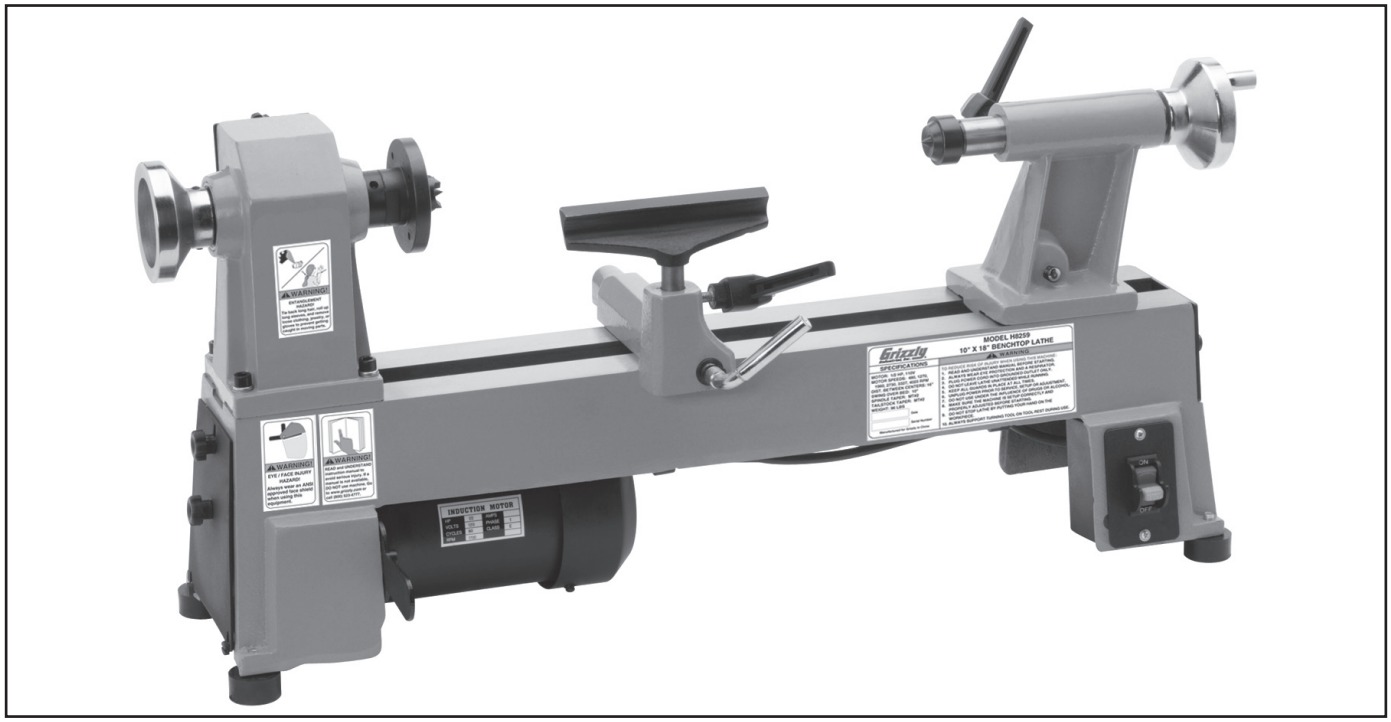
MODEL H8259
10" x 18" BENCHTOP LATHE
OWNER'S MANUAL



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⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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INTRODUCTION

Foreword

We are proud to offer the Model H8259 10" x 18" Benchtop Lathe. This machine is part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

We are pleased to provide this manual with the Model H8259. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible.

The specifications, drawings, and photographs illustrated in this manual represent the Model H8259 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at **www.grizzly.com**. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!

Contact Info

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc.
C/O Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

We stand behind our machines. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: http://www.grizzly.com

MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL H8259 10" x 18" BENCHTOP LATHE

Product Dimensions:

Weight	73 lbs.
Length/Width/Height	36 x 11½ x 15 in.
Foot Print (Length/Width)	29½ x 7½ in.

Shipping Dimensions:

Type	Cardboard
Content	Machine
Weight	77 lbs.
Length/Width/Height	33 x 17 x 12 in.

Electrical:

Switch	Paddle Type w/Disabling Key
Switch Voltage	110V
Cord Length	6 ft.
Cord Gauge	18 gauge
Recommended Minimum Circuit Size	15 amp
Plug	5-15

Motor:

Type	Capacitor Start
Horsepower	½ HP
Voltage	110V
Prewired	110V
Phase	Single
Amps	3.5A
Speed	1725 RPM
Cycle	60 Hz
Number Of Speeds	1
Power Transfer	Belt Drive
Bearings	Shielded and Lubricated

Main Specifications:

Construction

Swing Over Bed	10"
Swing Over Tool Rest	4 1/2"
Distance Between Centers	18"
Spindle TPI	1" x 8 TPI
Spindle Bore	.394"
Spindle Taper	MT#2
Tailstock Taper	MT#2
Number of Spindle Speeds	5
Spindle Speeds	606, 917, 1343, 1960, 2800 RPM
Bed Width	7 1/4"
Floor-to-Center Height	5"
Faceplate Size	3"
Bed Construction	Cast Iron
Frame Construction	Cast Iron and Steel
Headstock Construction	Cast Iron and Steel
Tailstock Construction	Cast Iron and Steel

Other Specifications:

Country Of Origin	China
Warranty	1 Year
Serial Number Location	Data Label on Lathe Bed
Assembly Time	10 minutes

Identification

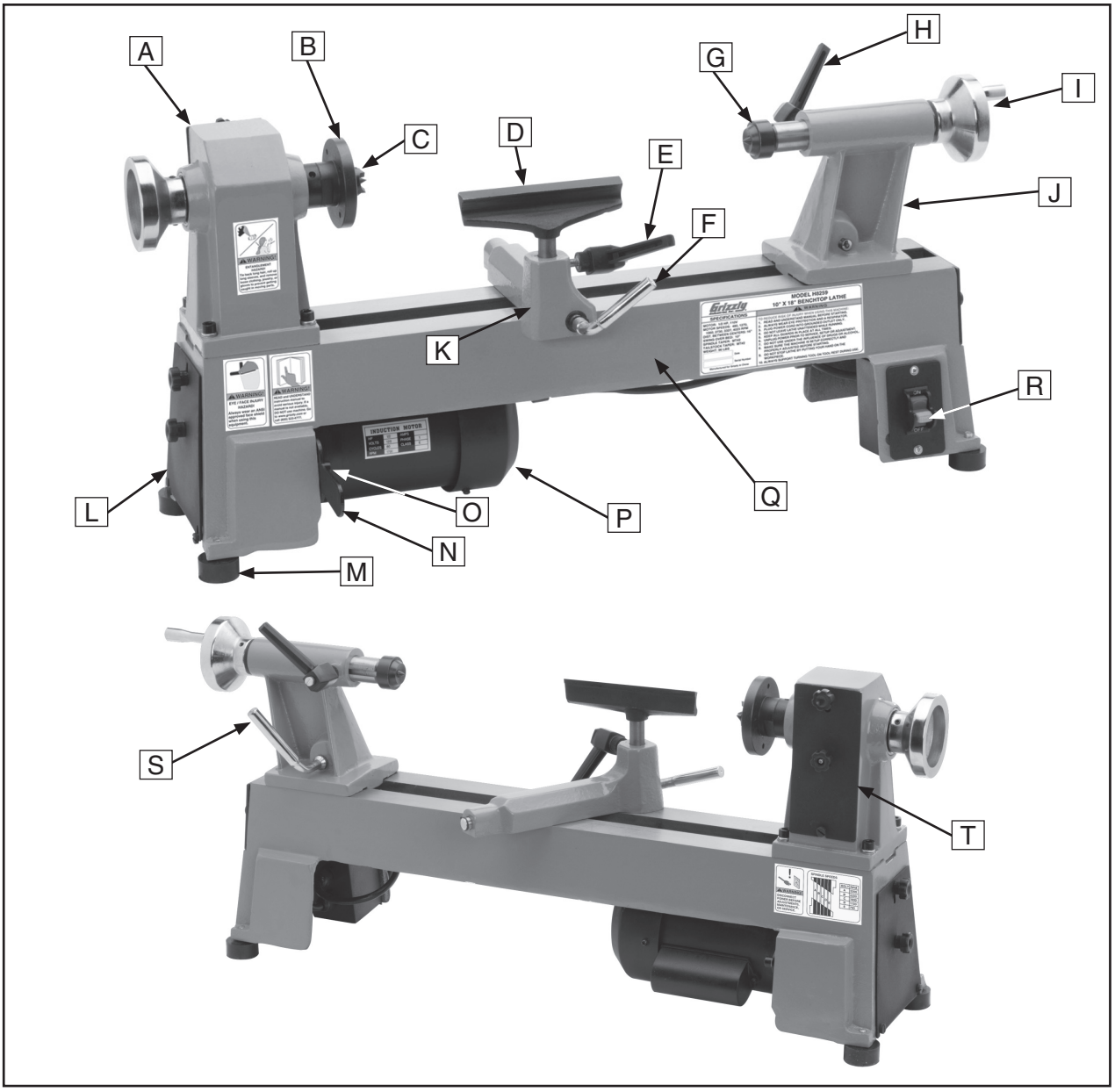


Figure 1. Model H8259 Identification.

A. Headstock
B. Faceplate
C. Spur Center
D. Tool Rest
E. Tool Rest Lock Handle
F. Tool Rest Base Release Lever
G. Live Center
H. Quill Lock Handle
I. Quill Handwheel
J. Tailstock
K. Tool Rest Base
L. Side Access Cover
M. Leveling Foot
N. Belt Tension Lever
O. Belt Tension Screw
P. Motor
Q. Lathe Bed
R. ON/OFF Switch w/Disabling Key
S. Tailstock Release Lever
T. Rear Access Cover

SECTION 1: SAFETY

⚠WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

⚠DANGER **Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.**

⚠WARNING **Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.**

⚠CAUTION **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.**

NOTICE **This symbol is used to alert the user to useful information about proper operation of the machine.**

⚠WARNING

Safety Instructions for Machinery

1. **READ THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
2. **ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.
3. **ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust can cause severe respiratory illnesses.
4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing loss.
5. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, or jewelry that can catch in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
6. **NEVER OPERATE MACHINERY WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

⚠WARNING
Safety Instructions for Machinery

7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.

8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.

9. **MAKE WORKSHOP CHILDPROOF.** Use padlocks, master switches, and remove start switch keys.

10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power ***OFF*** and allow all moving parts to come to a complete stop before leaving machine unattended.

11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.

12. **KEEP WORK AREA CLEAN AND WELL LIGHTED.** Clutter and dark shadows may cause accidents.

13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Grounded cords minimize shock hazards. Undersized cords create excessive heat. Always replace damaged extension cords.

14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY**. Make sure switch is in OFF position before reconnecting.

15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**

17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery ***ON***.

18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding or misaligned parts, broken parts, loose bolts, and any other conditions that may impair machine operation. Repair or replace damaged parts before operation.

19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. Improper accessories increase risk of injury.

20. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.

21. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.

22. **DO NOT OVERREACH.** Maintain stability and balance at all times.

23. **MANY MACHINES CAN EJECT WORKPIECES TOWARD OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."

24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY**.

25. **CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Be aware of the type of dust you are exposed to and always wear a respirator designed to filter that type of dust.

⚠WARNING
Additional Safety for Wood Lathes

1. **KEEPING GUARDS IN PLACE.** Make sure all guards are in place and that the lathe sits on a flat, stable surface.

2. **EYE/FACE PROTECTION.** Always wear eye protection or a face shield when operating the lathe.

3. **RESPIRATORY PROTECTION.** Always wear a respirator when using this machine. Wood dust may cause allergies or long-term respiratory health problems.

4. **MOUNTING WORKPIECE.** Before starting, be certain the workpiece has been properly imbedded on the headstock and tailstock centers and that there is adequate clearance for the full rotation.

5. **WORKPIECE CONDITION.** Always inspect the condition of your workpiece. DO NOT turn pieces with knots, splits, and other potentially dangerous conditions. Make sure joints of glued-up pieces have high quality bonds and won't fly apart during operation.

6. **ADJUSTING TOOL REST.** Adjust tool rest to provide proper support for the turning tool you will be using. Test tool rest clearance by rotating workpiece by hand before turning lathe ***ON***.

7. **TURNING SPEED.** Select the correct tuning speed for your work, and allow the lathe to gain full speed before operating.

8. **USING SHARP CHISELS.** Keep lathe chisels properly sharpened and held firmly in position when turning.

9. **OPERATING DAMAGED LATHE.** Never operate the lathe with damaged or worn parts.

10. **ADJUSTMENTS/MAINTENANCE.** Make sure your wood lathe is turned ***OFF***, disconnected from its power source, and all moving parts have come to a complete stop before starting any inspection, adjustment, or maintenance procedure.

11. **STOPPING LATHE.** DO NOT stop the lathe by using your hand against the workpiece. Allow the lathe to stop on its own.

12. **AVOIDING ENTANGLEMENT.** Keep long hair and loose clothing articles such as sleeves, belts, and jewelry items away from the lathe spindle.

13. **FACEPLATE TURNING.** When faceplate turning, use lathe chisels on the downward spinning side of the workpiece only.

14. **SANDING/POLISHING.** Remove the tool rest when performing sanding or polishing operations on the rotating spindle.

15. **MATERIAL REMOVAL RATE.** Removing too much material at once may cause workpiece to fly out of the lathe.

16. **REDUCING WORKPIECE VIBRATION**. If the workpiece vibrates, immediately turn the lathe ***OFF***. Check to make sure the workpiece is centered and balanced. Trim excess waste off corners with a bandsaw or table saw to reduce vibration. Make sure workpiece is securely attached in setup.

⚠WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

⚠CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

SECTION 2: CIRCUIT REQUIREMENTS

110V Operation

⚠WARNING

Serious personal injury could occur if you connect the machine to the power source before you have completed the set up process. DO NOT connect the machine to the power source until instructed to do so.

Amperage Draw

The Model H8259 motor draws the following amps under maximum load:

Motor Draw.....3.5 Amps

Circuit Recommendations

We recommend connecting your machine to a dedicated and grounded circuit that is rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.**

110V Circuit.....15 Amps

Plug/Receptacle Type

Included Plug Type.....NEMA 5-15

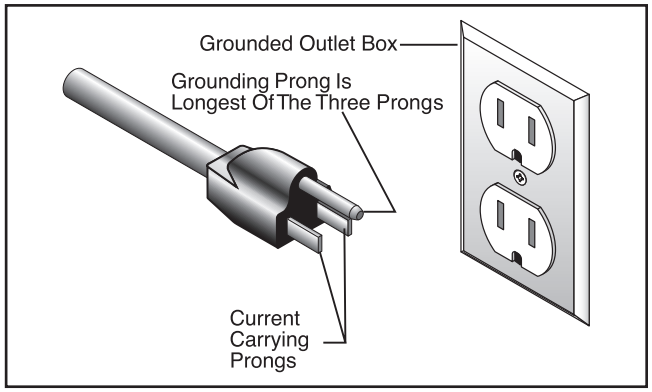
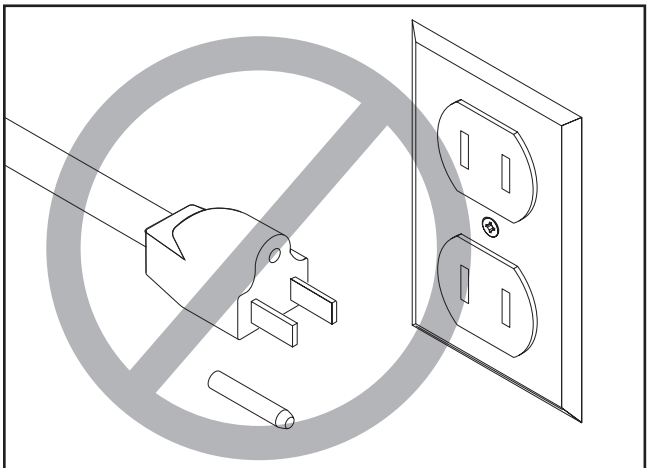


Figure 2. Typical type 5-15 plug and receptacle.

⚠WARNING

Electrocution or fire could result if this machine is not grounded correctly or if your electrical configuration does not comply with local and state codes. Ensure compliance by checking with a qualified electrician!



⚠CAUTION

This machine must have a ground prong in the plug to ground it. DO NOT remove ground prong from plug to fit into a two-pronged outlet! If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician.

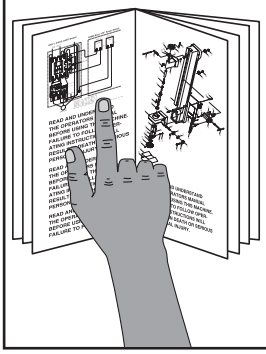
Extension Cords

We do not recommend the use of extension cords, but if you find it absolutely necessary:

- Use at least a 14 gauge cord that does not exceed 50 feet in length!
- The extension cord must also contain a ground wire and plug pin.
- A qualified electrician MUST size cords over 50 feet long to prevent motor damage.

SECTION 3: SETUP

Set Up Safety



⚠WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

⚠WARNING

Wear safety glasses during the entire setup process!

⚠WARNING

The Model H8259 is a heavy machine. DO NOT over-exert yourself while unpacking or moving your machine—get assistance.

Unpacking

The Model H8259 was carefully packed when it left our warehouse. If you discover the machine is damaged after you have signed for delivery, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.

Inventory

After all the parts have been removed from the box, you should have the following items:

Box Contents: (**Figure 3**)	**Qty**
A. 10" x 18" Benchtop Lathe (Not Shown)	1
B. Live Center MT#2	1
C. Spur Center MT#2	1
D. Quill Handwheel Crank	1
E. Hex Wrenches 3, 6, 8mm	1 Each

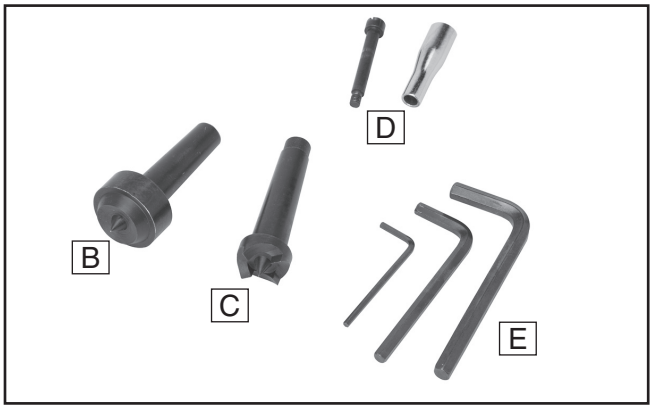
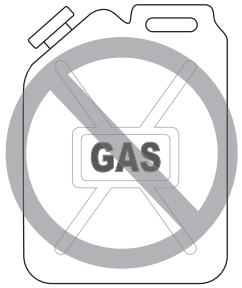


Figure 3. Box contents.

If any nonproprietary parts are missing (e.g. a nut or a washer), we will gladly replace them, or for the sake of expediency, replacements can be obtained at your local hardware store.

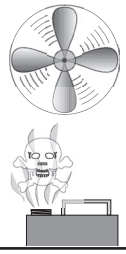
Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Citrus Degreaser. To clean thoroughly, some parts must be removed. **For optimum performance from your machine, clean all moving parts or sliding contact surfaces.** Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.



⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. DO NOT use these products to clean the machinery.



⚠CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

G7895—Grizzly Citrus Degreaser
This natural, citrus-based degreaser is a great solution for removing export grease, and it's much safer to work around than nasty solvents.

Figure 4. Grizzly citrus degreaser.

Site Considerations

Workbench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support both the machine and the workpiece.

Placement Location

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figure 5** for the minimum working clearances.

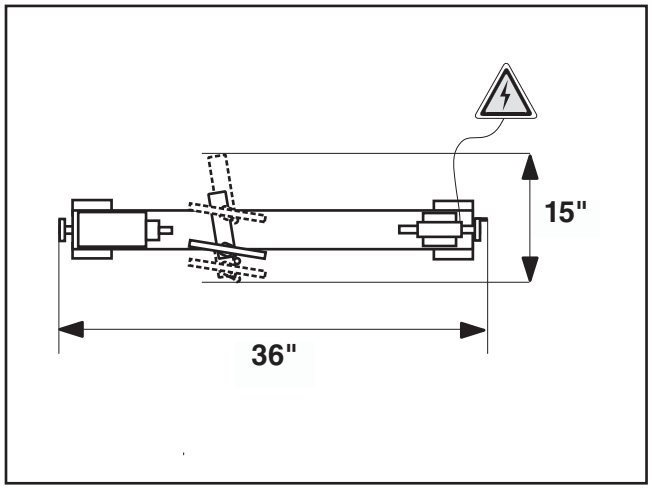
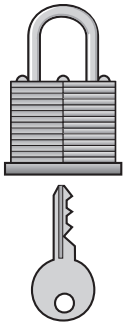


Figure 5. Minimum working clearances.



⚠CAUTION

Children and visitors may be seriously injured if unsupervised. Lock all entrances to the shop when you are away. DO NOT allow unsupervised children or visitors in your shop at any time!

Assembly

Before use, the tool rest must be moved out of its shipping position and the quill handwheel knob must be attached.

To assemble the lathe:

1. Loosen the release lever and rotate the tool rest base away from the lathe bed.

2. Loosen the tool rest lock handle and rotate the tool rest so that it is positioned parallel to the lathe bed (**Figure 6**).

3. Tighten the tool rest lock handle.

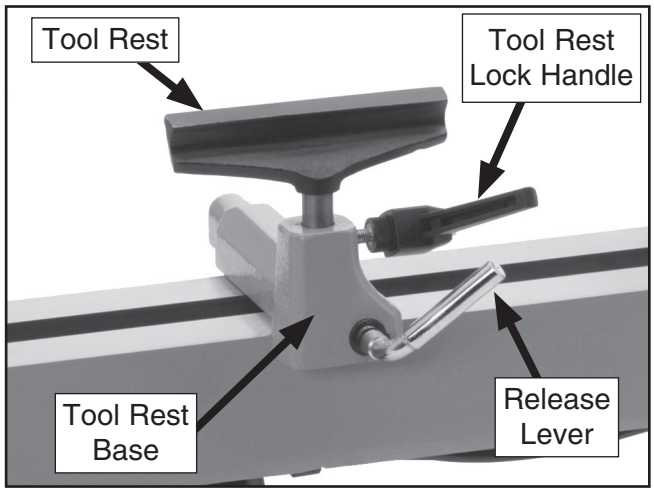


Figure 6. Tool rest positioned.

4. Secure the crank to the quill handwheel (**Figure 7**).

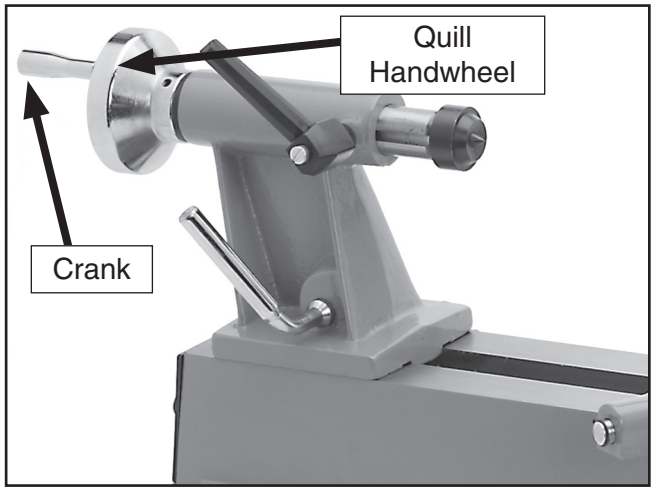


Figure 7. Quill handwheel crank installed.

Test Run

Once the assembly is complete, test run your machine to make sure it runs properly and is ready for regular operation.

The test run consists of verifying the following:
1) The motor powers up and runs correctly.
2) The safety paddle switch works correctly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review the **Troubleshooting** on **Page 26**. If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

To test run the machine:

1. Make sure that you have read the safety instructions at the beginning of this manual and that the machine is setup properly.

2. Connect the machine to the power source.

3. Turn the machine ***ON***. Make sure that your hand stays poised over the switch in case you need to quickly turn the machine ***OFF***.

   —When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.

   —Investigate and correct strange or unusual noises or vibrations before operating the machine further. Always disconnect the machine from power before investigating or correcting potential problems.

4. Turn the machine ***OFF***.

5. Remove the safety key and attempt to turn the machine ***ON***.

   —If the machine starts, stop it and disconnect it from power. The switch disabling feature is not working. This safety feature must work properly before proceeding. Call Tech Support for help.

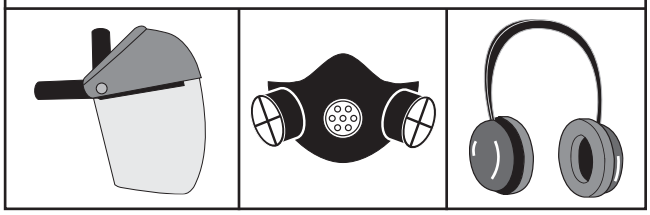
   —If the machine does not start, the switch disabling feature is working.

SECTION 4: OPERATIONS

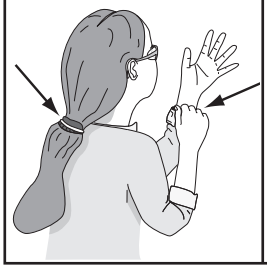
Operation Safety

⚠WARNING

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear a face shield, respirator, and hearing protection when operating this machine.



⚠WARNING



Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.

NOTICE

If you have never used this type of machine or equipment before, WE STRONGLY RECOMMEND that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

Changing Speeds

To change speeds, the belt in the headstock must be adjusted. A chart on the rear of the lathe bed shows the belt positions needed to make the lathe run at the desired speed.

To change speeds:

1. UNPLUG THE LATHE FROM POWER!

2. Loosen the belt tension screw and motor mount screw (**Figures 8 & 9**). Be sure the belt tension lever moves freely to release tension from the belt .

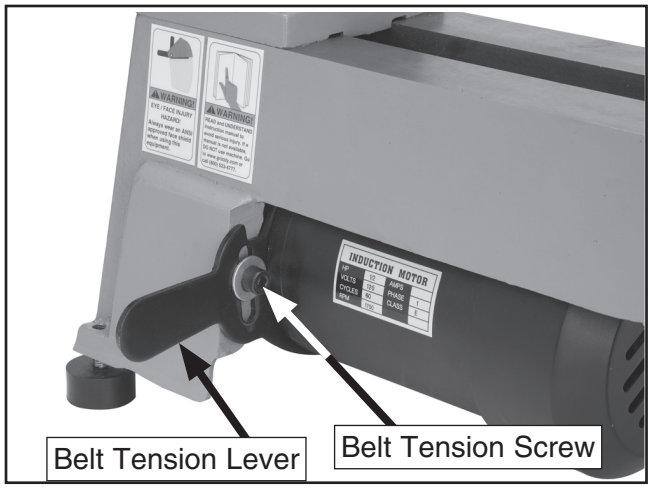


Figure 8. Belt tension lever.

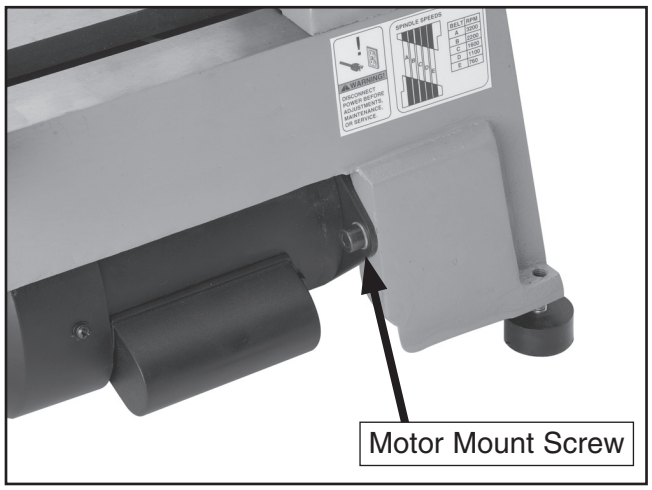


Figure 9. Motor mount screw location.

3. Open the side and rear access covers (**Figure 10**).

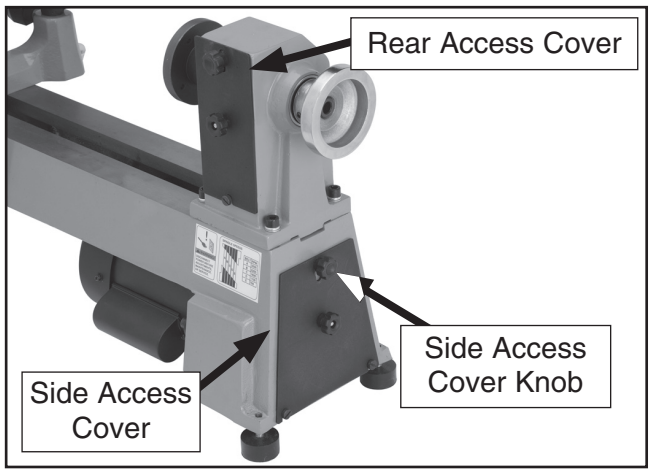
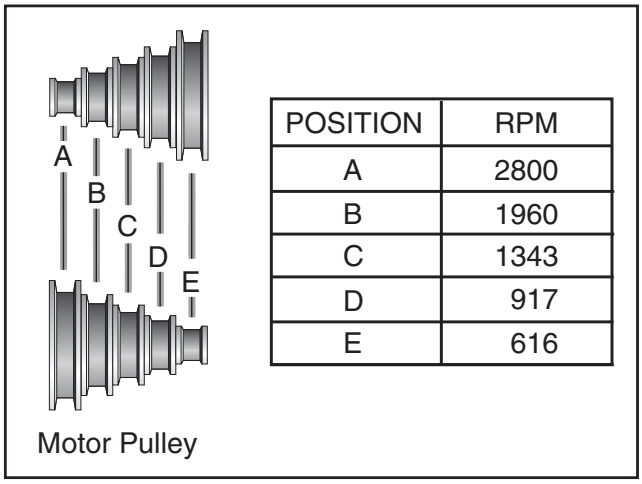


Figure 10. Side and rear access covers.

4. Locate the desired speed on the speed chart on the rear of the lathe bed, and move the belt to the desired grooves on the motor and spindle pulleys.

For Example: As indicated in the speed chart, belt position **B** creates **1960 RPM** (**Figure 11**).



POSITION	RPM
A	2800
B	1960
C	1343
D	917
E	616

Figure 11. H8259 Spindle speeds.

5. Move the belt tension lever down, adjusting tension so that ½" of belt deflection is measured as shown in **Figure 12**, then tighten belt tension lever screw.

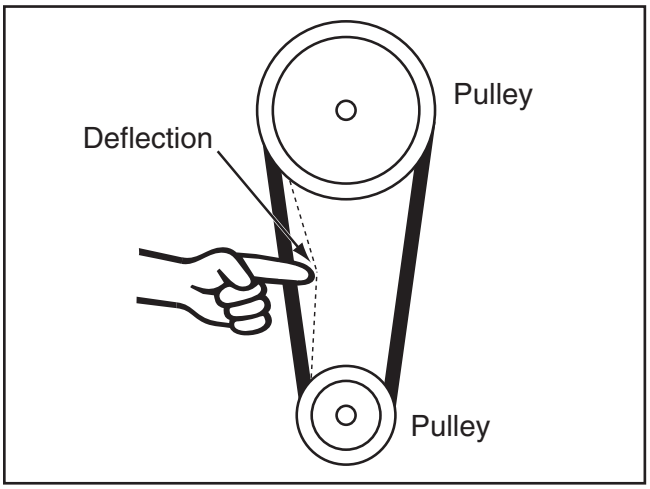


Figure 12. Belt deflection.

6. Tighten the motor mount screw.

7. Replace the rear and side covers and tighten the cover knobs.

Adjusting Tailstock

The tailstock is equipped with a cam-action clamping system to secure it to the lathe bed. When the lever is tightened, a locking plate lifts and secures the tailstock to the bed.

To position the tailstock along the bed:

1. Loosen the release lever and move the tailstock to the desired position (**Figure 13**).

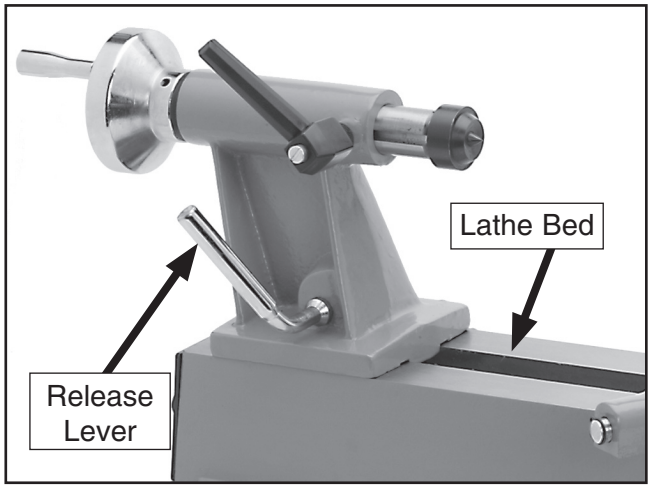


Figure 13. Tailstock controls.

2. Re-engage the release lever.

3. If the release lever will not lock or release the tailstock (either too loose or too tight), loosen or tighten the tailstock mounting nut (located on the underside of the tailstock) in small increments as needed to achieve the proper clamping pressure.

Adjusting Tool Rest

The tool rest base is equipped with a cam-action clamping system to secure it to the lathe bed. When the lever is engaged, a locking plate lifts up and secures the tool rest base to the bed.

To position the tool rest base along the bed:

1. Loosen the release lever and slide the tool rest base along the bed (**Figure 14**).

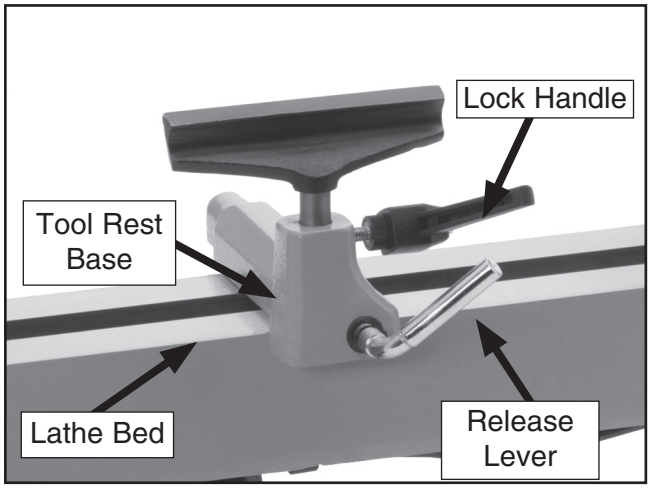


Figure 14. Tool rest controls.

2. Re-engage the release lever to lock the tool rest base in place.

   —If the release lever will not lock or release(either too loose or too tight), then loosen or tighten the tool rest base mounting nut (located on the underside of the tool rest base) in small increments as needed to achieve the proper clamping pressure.

To adjust the tool rest:

1. Loosen the lock handle (**Figure 14**) and adjust the tool rest vertically or swivel it as needed, then tighten the lock handle.

Installing/Removing Spur Center

The spur center installs into the headstock spindle with a taper fit.

To install the spur center:

1. UNPLUG LATHE FROM POWER!

2. Insert the tapered end of the center into the spindle, and push it in quickly and firmly (**Figure 15**).

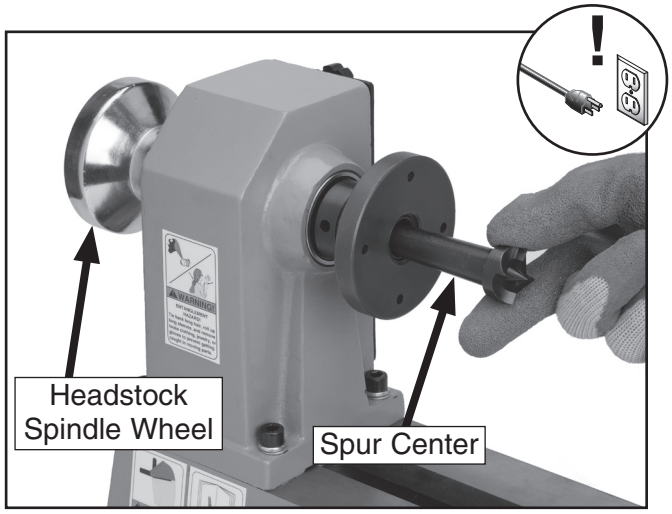


Figure 15. Inserting spur center into spindle.

3. Check that the center is securely installed by giving it a quick tug. (A properly installed center will not pull out by hand.)

To remove the spur center:

1. UNPLUG LATHE FROM POWER!

2. Hold the headstock spindle wheel securely while turning the faceplate counterclockwise until the spur center is forced out of the headstock spindle (**Figure 16**).

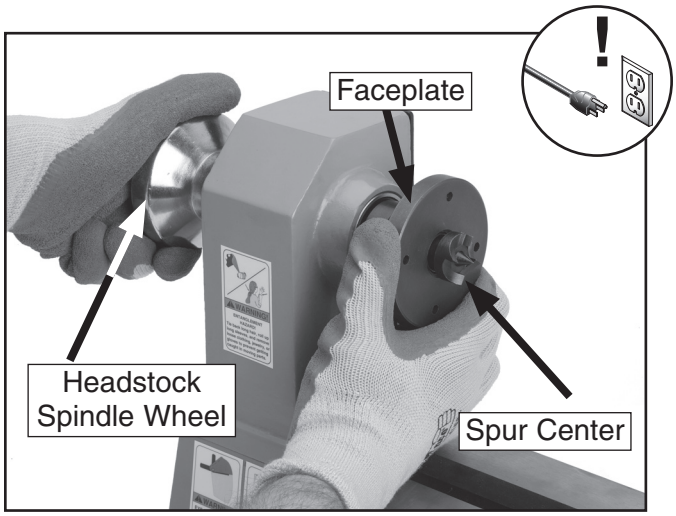


Figure 16. Removing spur center.

Note: *If the lathe is used with the faceplate removed, a knockout tool (not included) is required for removing the spur center.*

Installing/Removing Live Center

To install the live center:

1. Loosen the quill lock handle (if locked) approximately half a turn counterclockwise.

2. Rotate the quill handwheel clockwise until the tailstock quill protrudes out of the tailstock housing about ¾".

3. Insert the live center, as shown in **Figure 17**, and push firmly.

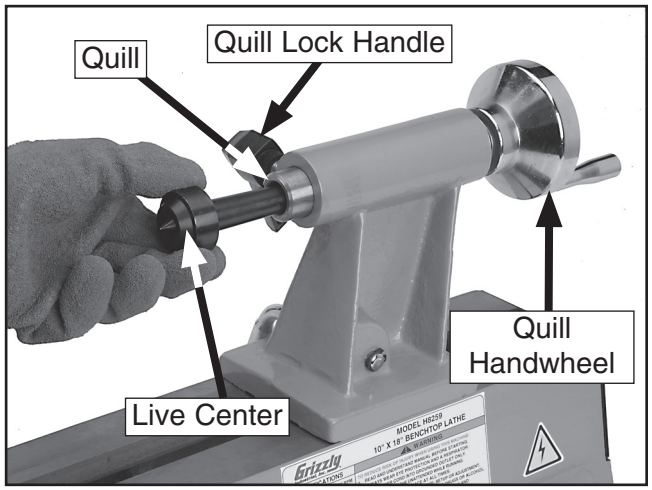


Figure 17. Installing live center in tailstock.

4. Tighten the quill lock handle.

To remove the live center:

1. Loosen the quill lock handle (if locked) approximately half a turn counterclockwise.

2. Turn the quill handwheel counterclockwise until the tailstock quill bottoms out, causing the live center to be forced out of the quill.

⚠WARNING

The tailstock quill lock handle must always be locked down while the lathe is in use. The workpiece can be thrown from the lathe if this step is not observed. Also, the tailstock quill should not protrude from the tailstock housing more than 2'' or the quill will not be supported enough. Failure to follow these warnings may result in personal injury.

Removing/Installing Faceplate

To remove faceplate:

1. UNPLUG LATHE FROM POWER!

2. Hold the headstock spindle wheel securely while turning the faceplate counterclockwise until it is removed. If the spur center is installed, it will be removed during this process.

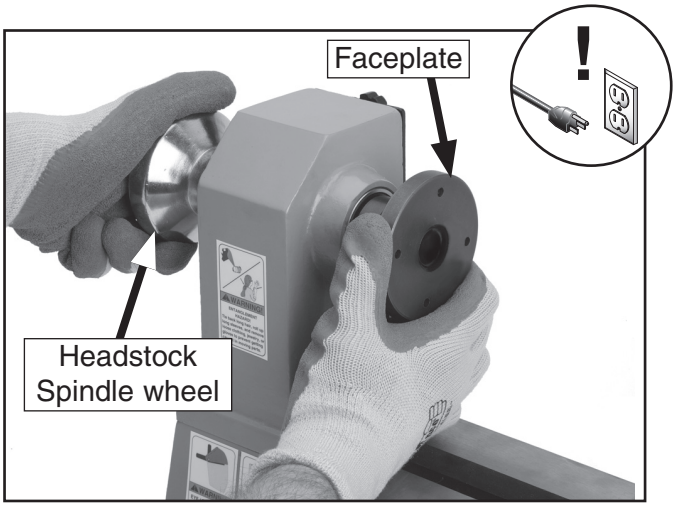


Figure 18. Removing faceplate.

To install faceplate:

1. UNPLUG LATHE FROM POWER!

2. Thread faceplate onto spindle shaft until it is secure against the shoulder on the spindle shaft.

To mount a workpiece to your faceplate, refer to **Page 20**.

Selecting Turning Tools

Lathe tools come in a variety of shapes and sizes and usually fall into five major categories.

- **Gouges**—Mainly used for rough cutting, detail cutting, and cove profiles. The rough gouge is a hollow, double-ground tool with a round nose, and the detail gouge is a hollow, double-ground tool with either a round or pointed nose. **Figure 19** shows an example of a gouge.

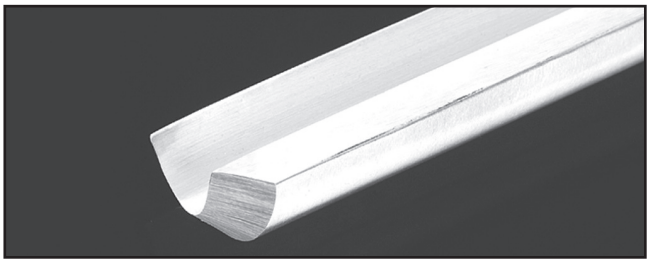


Figure 19. Gouge.

- **Skew Chisel**—A very versatile tool that can be used for planing, squaring, V-cutting, beading, and parting off. The skew chisel is flat, double-ground with one side higher than the other (usually at an angle of 20-40˚). **Figure 20** shows an example of a skew chisel.

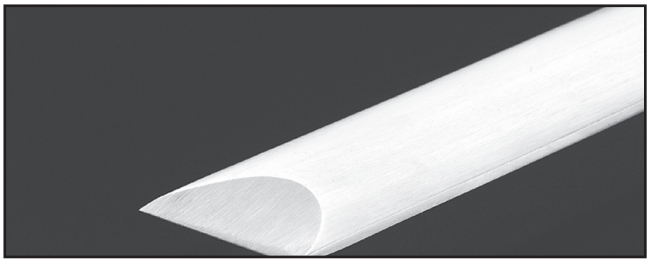


Figure 20. Skew chisel.

- **Scrapers**—Mainly used where access for other tools is limited, such as hollowing operations. This is a flat, double-ground tool that comes in a variety of profiles (Round Nose, Spear Point, Square Nose, etc.) to match many different contours. **Figure 21** shows an example of a round nose scraper.

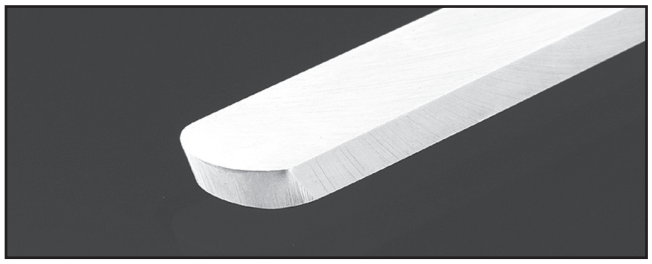


Figure 21. Round nose scraper.

- **Parting Tools**—Used for sizing and cutting off work. This is a flat tool with a sharp pointed nose that may be single- or double-ground. **Figure 22** shows an example of a parting tool.

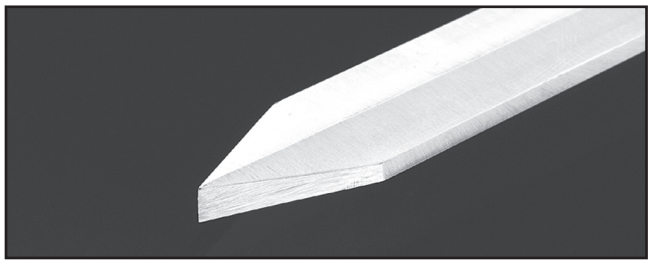


Figure 22. Parting tool.

- **Specialty Tools**—These are the unique, special function tools to aid in hollowing, bowl making, cutting profiles, etc. The Swan Neck Hollowing Tool shown on **Page 23** is a good example of a specialty tool.

Spindle Turning

Spindle turning (**Figure 23**) is the operation performed when a workpiece is mounted between the headstock and the tailstock.

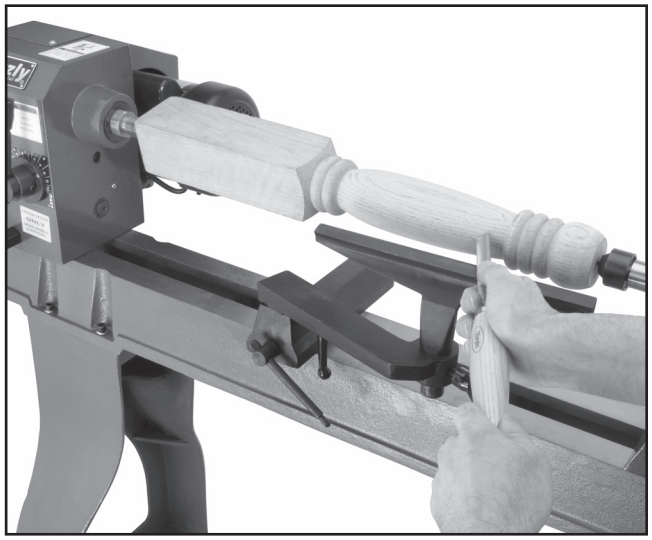


Figure 23. Typical spindle turning operation.

To set up a spindle turning operation:

1. Mark both ends of your workpiece by drawing diagonal lines from corner to corner. The intersection point of these lines will show you the center of your workpiece. See **Figure 24** for details.

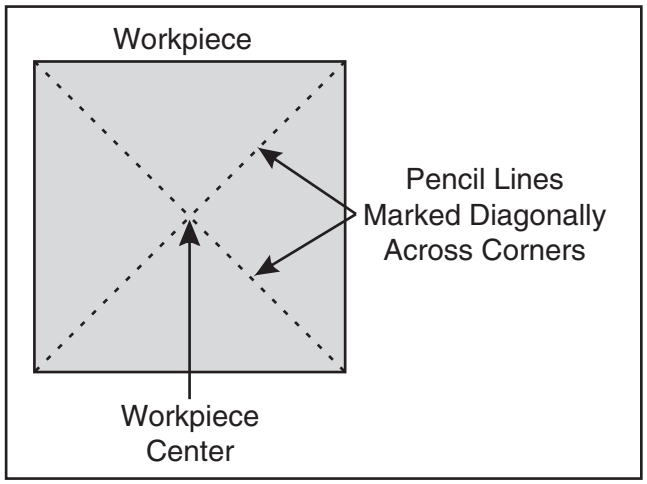


Figure 24. Workpiece marked diagonally from corner to corner to determine the center.

2. Using a wood mallet, tap the point of the spur center into the center of the workpiece, so that it leaves a center mark, then remove the spur center.

3. Using a ⅛" drill bit, drill a 3⁄16" deep hole at the center mark.

4. Cut the corners off your workpiece if it is over 2" x 2" to make turning safer and easier.

5. Drive the spur center into the center of the workpiece with a wood mallet to embed it at least ¼", as shown in **Figure 25**.

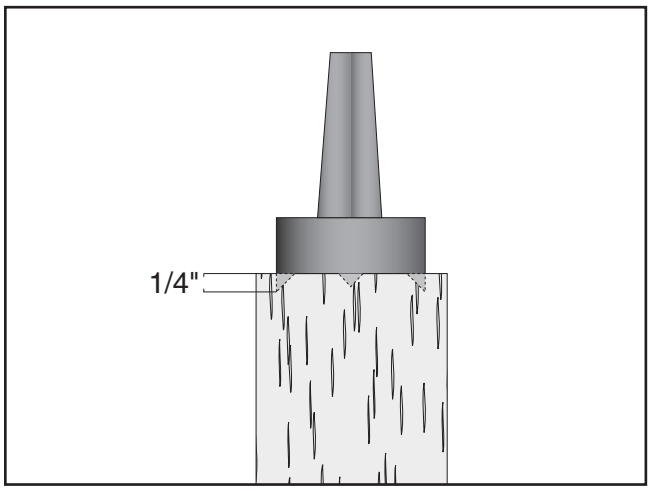


Figure 25. Spur center properly embedded.

6. With the workpiece still attached, insert the spur center into the headstock spindle.

7. With the live center installed in the tailstock, slide the tailstock toward the workpiece until the live center touches the workpiece centerpoint, then lock the tailstock in this position.

8. Use the quill handwheel to push the live center into the workpiece at least ¼".

⚠WARNING

Do not press the workpiece too firmly with the tailstock or the bearings will bind and overheat. Likewise, do not leave it too loose or the workpiece will spin off the lathe. Use good judgement. Serious personal injury could result if care is not taken.

9. Position the tool rest approximately ¼" away from the workpiece and approximately ⅛" above the center line, as shown in **Figure 26**.

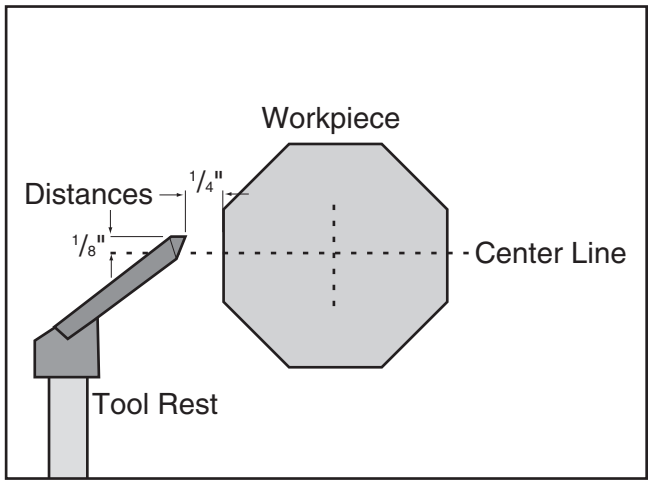


Figure 26. Tool rest position.

10. Test the setup by hand-turning the workpiece to make sure there is enough clearance all the way around before starting.

Spindle Turning Tips:

- When turning the lathe ***ON***, stand to the side of the spinning direction until the lathe reaches full speed and you can verify that the lathe will not throw the workpiece.
- Use the slowest spindle speed when rough cutting.
- Select the right speed for the size of workpiece you are turning. Use slower speeds for large workpieces (4" diameter and over); use the middle range speeds for medium sized workpieces (2" to 4" diameter); and use faster speeds for small sized workpieces (under 2" in diameter).
- Keep the turning tool on the tool rest the ENTIRE time that it is in contact with the workpiece.
- Learn the correct techniques for each tool you will use. If you are unsure, read books or magazines about lathe techniques and seek training from experienced users.
- Turn the lathe ***OFF*** immediately if the workpiece vibrates excessively. Check to make sure the workpiece is centered and balanced. Remove the workpiece and trim excess waste off corners with a bandsaw or table saw to reduce vibration. Make sure the workpiece is securely attached in the setup.

Faceplate Turning

Faceplate turning (**Figure 27**) is when a workpiece is mounted to the faceplate, which is mounted to the headstock spindle. This type of turning is usually done with open-faced workpieces like bowls.

If screws cannot be placed in the workpiece, then a backing block can be glued to the workpiece and attached to the faceplate with screws.

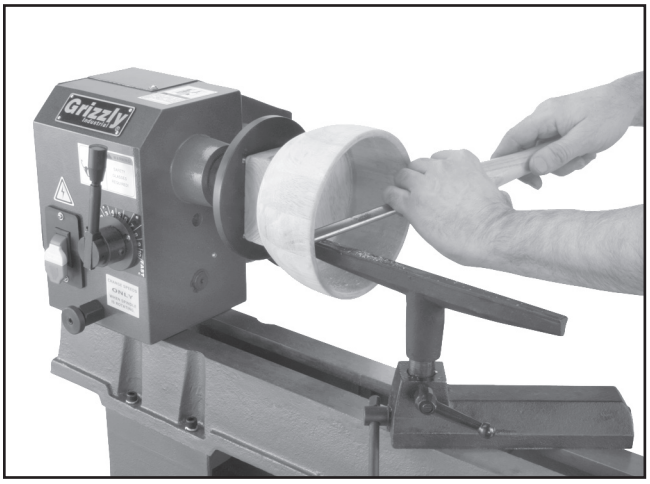


Figure 27. Typical faceplate turning operation.

To mount your workpiece to the faceplate:

1. Find the center of your workpiece in the same manner as when spindle turning.

2. Cut off the corners of the workpiece.

3. Center the faceplate on the workpiece and attach it through the faceplate holes with non-tapered head wood screws as shown in Figure **28**.

4. Thread the faceplate onto the headstock spindle and tighten securely.

NOTICE: *Only use tap screws or wood screws with non-tapered heads (**Figure 28**) to attach the faceplate to the workpiece. Do NOT use drywall screws or screws with tapered heads because these can split the faceplate, or the screws may snap off during operation.*

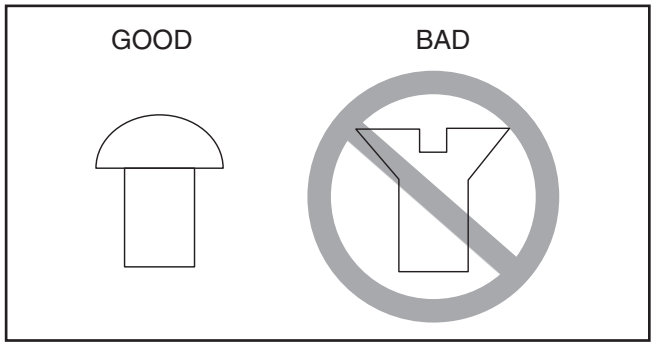


Figure 28. Correct and incorrect screw types for mounting faceplate to workpiece.

To mount your workpiece to a backing block:

1. Make the backing block (**Figure 29**) from a piece of scrap wood that is flat on both sides.

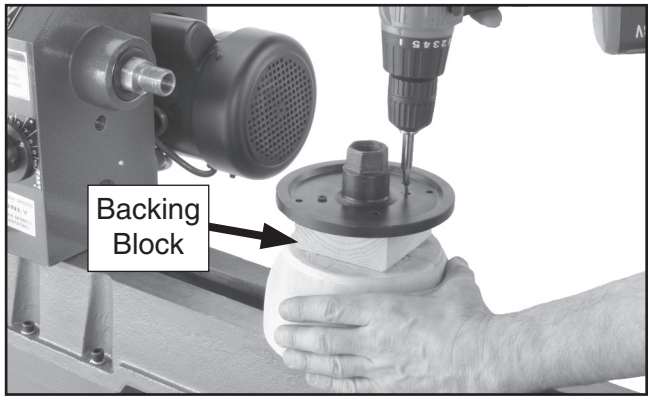


Figure 29. Example of mounting faceplate to a backing block.

2. Locate and mark the center of both the workpiece and the backing block.

3. Drill a ¼" diameter hole through the center of the backing block.

4. Glue the center of the backing block to the center of the workpiece (look through the drilled hole to line up centers), clamp the backing block to the workpiece, and wait for the glue to cure according to the manufacturer's recommendation.

Sanding/Finishing

After turning, the workpiece can be sanded, as shown in **Figure 30**, and finished (in the same manner) before removing it from the lathe.

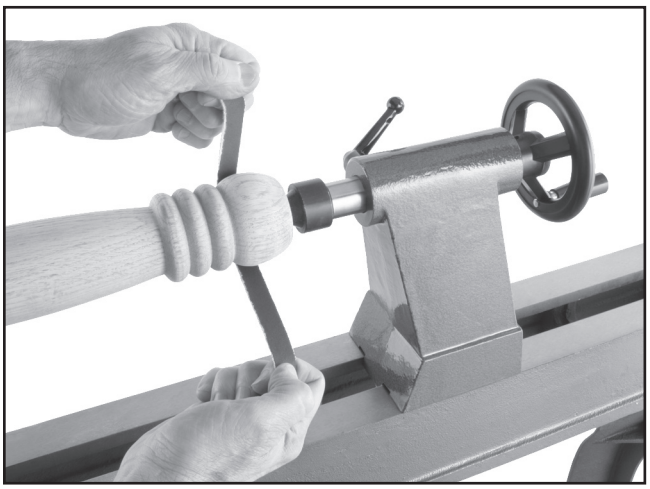
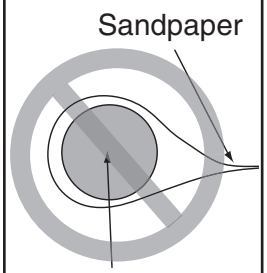


Figure 30. Typical sanding operation.



⚠CAUTION

Wrapping the sandpaper completely around the workpiece will pull your hands into the moving workpiece and may cause injury. Never wrap sandpaper completely around the workpiece!

Whenever sanding or finishing, move the tool rest holder out of the way to increase personal safety and gain adequate working room.

SECTION 5: ACCESSORIES

G1194—3-Jaw Chuck
A "must have" for the serious wood turner. This 3-jaw chuck is a self-centering style chuck used mostly for round work. All three jaws tighten together at the same time. Jaws are reversible for expanded work holding capacity. *Threaded insert required for mounting!*

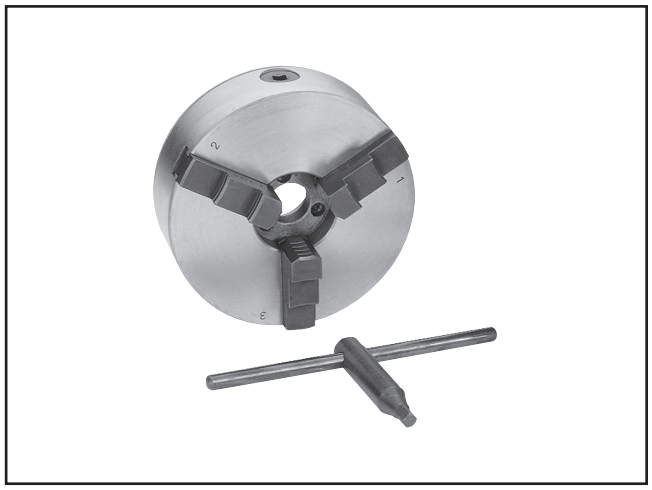


Figure 31. Model G1194 3-Jaw Chuck.

G1082—4-Jaw Chuck
Another "must have" for the serious wood turner. This 4-jaw chuck is an independent type chuck that is used for square and odd-shaped pieces. Each jaw tightens individually and can be turned around to hold larger dimension workpieces. *Threaded insert required for mounting!*

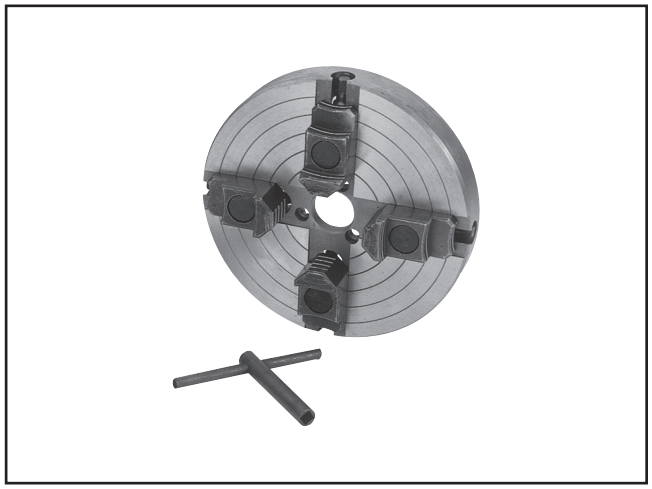


Figure 32. Model G1082 4-Jaw Chuck.

G3163—1" x 8 TPI RH Threaded Insert.
This threaded insert is required to mount a 3- or 4-jaw chuck to your wood lathe.

H7828—Tool Table Plus
The new Tool Table Plus was designed in response to customer requests for a slightly wider and taller table to accommodate small planers, wood lathes, sanders and a variety of other bench-top machines.

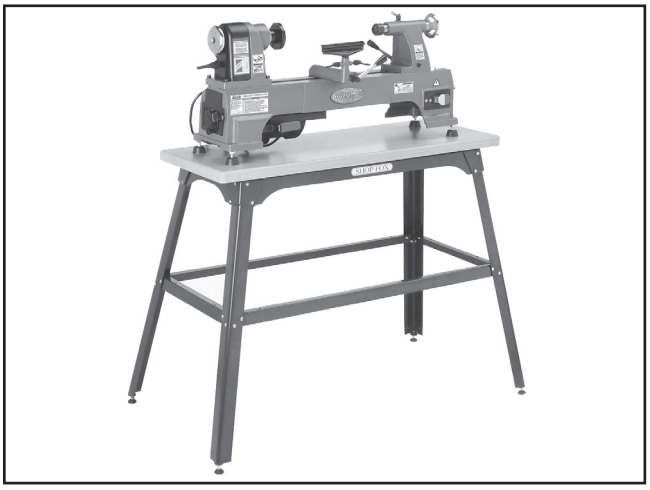


Figure 33. Model H7828 Tool Table Plus.

H6542—Robert Sorby HSS 8-PC Turning Set
G1676—Drill Chuck Arbor MT#2 x JT#3
H6204—Precision Drill Chuck 1/32"–5/8" x JT#3
H3102, H3103, H3104—Gouge Slipstones
H1064—6-PC Deluxe HSS Lathe Chisel Set
G9863—8-PC HSS Lathe Chisel Set
H0507—20" Swan Neck Hollowing Tool
H0508—24" Swan Neck Hollowing Tool

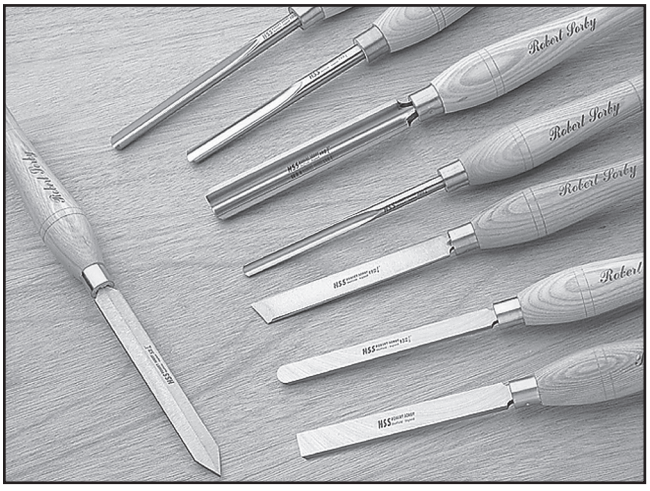
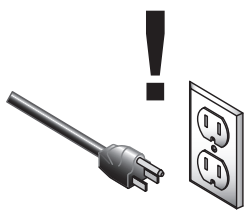


Figure 34. Model H6542 Robert Sorby 8-PC Set.

Call 1-800-523-4777 To Order

SECTION 6: MAINTENANCE



⚠WARNING

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Check:
- Loose mounting bolts.
- Worn or damaged wires.
- Worn switch
- Any other unsafe condition.

Monthly Check:
- Belt tension, damage, or wear.
- Clean/vacuum dust buildup off of motor.

Cleaning

Cleaning the Model H8259 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning.

Unpainted Cast Iron

Protect the unpainted cast iron surfaces on the lathe by wiping them clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

Keep the bed rust-free with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9.

Lubrication

Lubricate the locations shown in **Figure 35** with light machine oil or G96® Gun Treatment.

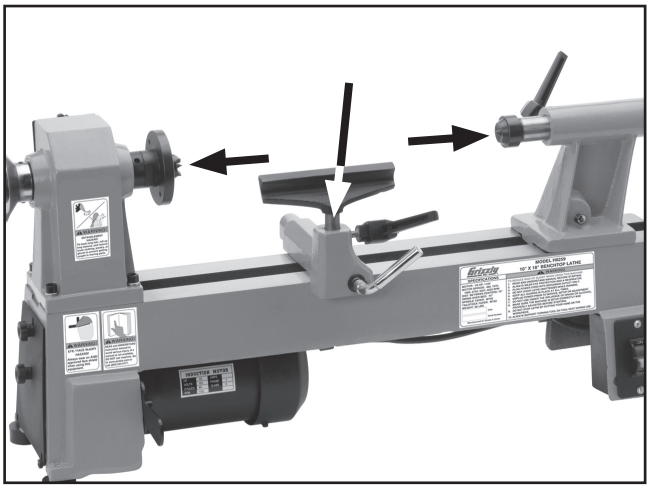


Figure 35. Lubrication locations.

Changing Belt

To remove the old belt:

1. Open the side and rear access covers as shown in **Steps 1-5** in the **Changing Speeds** procedure on **Page 13**.

2. Roll the belt off of the motor (lower) pulley (**Figure 36**).

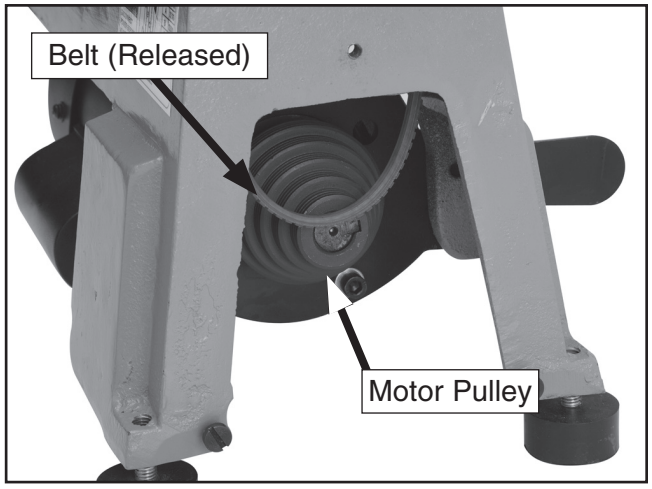


Figure 36. Belt removed from lower pulley.

3. Loosen both set screws on the headstock spindle wheel (**Figure 37)** and turn it clockwise to unthread and remove it.

4. Loosen the set screw on the spindle pulley through the rear cover access until the pulley spins freely on the spindle (refer to **Figure 37** for set screw locations).

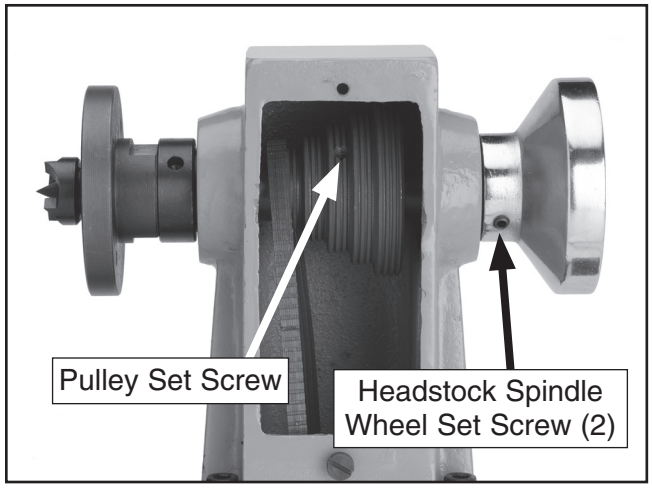


Figure 37. Set screw locations.

5. Tap the spindle far enough out of the headstock so that the belt can be removed. A rubber or wooden mallet may be required. Take care not to damage the spindle threads.

To install new belt:

1. Place the new belt over the spindle pulley.

2. Slide the spindle back through the headstock and into the original position. A mallet may be required.

3. Install the headlock spindle wheel and tighten both set screws.

4. Loosely install the belt on the motor pulley in one of the five available positions, making sure to leave access to the pulley set screw.

5. Adjust the spindle pulley position on the spindle shaft to ensure proper belt alignment (**Figure 38**).

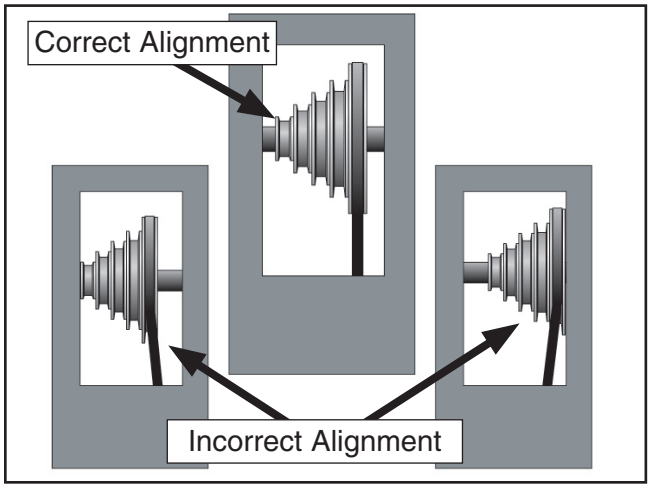


Figure 38. Proper belt alignment.

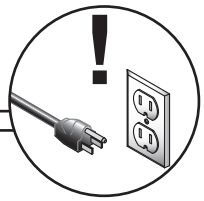
6. Rotate the spindle pulley on the spindle shaft until the set screw aligns with the keyway on the spindle shaft, then tighten the set screw.

7. Complete the new belt installation by following **Steps 6-9** in the **Changing Speeds** procedure on **Page 14**.

SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	1. Plug/receptacle is at fault or wired incorrectly.	1. Test for good contacts; correct the wiring.
	2. Power supply is at fault/switched ***OFF***.	2. Ensure hot lines have correct voltage on all legs and main power supply is switched ***ON***.
	3. Lockout key is at fault.	3. Install/replace lockout key; replace switch.
	4. Motor ON button or ON/OFF switch is at fault.	4. Replace faulty ON button or ON/OFF switch.
	5. Wiring is at fault.	5. Check for broken wires or disconnected/corroded connections, and repair/replace as necessary.
	6. Motor is at fault.	6. Test/repair/replace.
Machine stalls or is underpowered.	1. Plug/receptacle is at fault.	1. Test for good contacts; correct the wiring.
	2. Motor bearings are at fault.	2. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
	3. Motor has overheated.	3. Clean off motor, let cool, and reduce workload.
	4. Motor is at fault.	4. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or component is loose.	1. Inspect/replace stripped or damaged bolts/nuts, and re-tighten with thread locking fluid.
	2. Motor fan is rubbing on fan cover.	2. Replace dented fan cover; replace loose/damaged fan.
	3. Workpiece or chuck is at fault.	3. Center workpiece in chuck or face plate; reduce RPM; replace defective chuck.
	4. Motor bearings are at fault.	4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Wood Lathe Operation

Symptom	Possible Cause	Possible Solution
Vibration noise while machine is running; noise changes when speed is changed.	1. Belt cover loose.	1. Tighten the belt cover lock handle; if necessary install a soft, vibration dampening material (between the belt cover and the headstock casting.
	2. Belt cover bent or dented and is making contact with the motor pulley or belt.	2. Remove belt cover and inspect the inside for dents, bends, or indications of rubbing. Tap out the dent with a rubber mallet, bend back into proper shape, or shim belt cover away from the motor pulley.

Symptom	Possible Cause	Possible Solution
Vibration noise while machine is running; noise remains constant when speed is changed.	1. Dented fan cover on motor.	1. Replace or adjust fan cover. Inspect motor fan and replace if damaged.
Motor is running but spindle is not turning.	1. Belt is loose, broken, or has come off pulleys.	1. Inspect belt and tighten, reinstall, or replace if damaged.
Excessive vibration.	1. Workpiece mounted incorrectly. 2. Workpiece warped, out of round, or is flawed. 3. Spindle speed is set too fast for mounted workpiece. 4. Lathe is resting on an uneven surface. 5. Motor mount bolts are loose. 6. Belt is worn or damaged. 7. Spindle bearings are worn.	1. Re-mount workpiece, making sure that centers are embedded in true center of workpiece. 2. Cut workpiece to correct, or use a different workpiece. 3. Reduce the spindle speed. 4. Shim or adjust feet to remove any wobbles. 5. Tighten motor mount bolts. 6. Replace belt. 7. Replace spindle bearings.
Chisels grab or dig into workpiece.	1. Tool rest set too low. 2. Tool rest set too far from workpiece. 3. Wrong chisel/tool being used. 4. Chisel/tool dull.	1. Set tool rest higher. See **Page 20** for how to properly set the tool rest height. 2. Move the tool rest closer to the workpiece. See **Page 20** for the proper workpiece/tool rest clearance. 3. Use the correct chisel/tool; educate yourself by reading books, trade magazines, or seeking help from an experienced lathe operator. 4. Sharpen or replace the chisel/tool you are using.
Bad surface finish.	1. Wrong spindle speed. 2. Dull chisel or wrong chisel being used for the operation.	1. Use trial-and-error to find a better spindle speed. 2. Sharpen chisel or try a different chisel.
Tailstock moves.	1. Tailstock mounting bolt loose. 2. Too much clamping pressure applied by tailstock. 3. Bed surface is oily or greasy.	1. Tighten. 2. Apply less clamping pressure with tailstock. 3. Clean bed surface to remove oil/grease.
Can't remove tapered tool from tailstock barrel.	1. Tailstock barrel had not retracted all the way back into the tailstock. 2. Debris was not removed from taper before inserting into barrel.	1. Turn the barrel handwheel until it forces taper out of barrel. 2. Always make sure that taper surfaces are clean.

H8259 Wiring Diagram

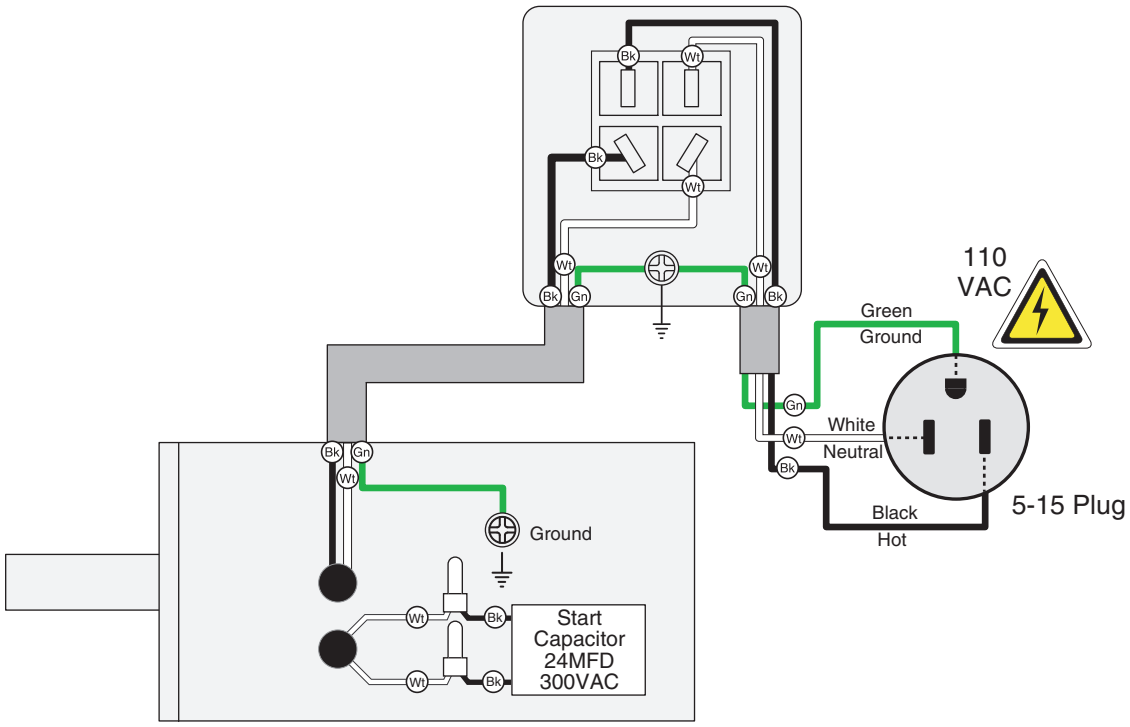
COLOR KEY	
BLACK	Bk
WHITE	Wt
GREEN	Gn

DANGER

Disconnect power before performing any electrical service. Electricity presents serious shock hazards that will result in severe personal injury and even death!

View this page in color at *www.grizzly.com.*

PADDLE SWITCH
(viewed from behind)



MOTOR

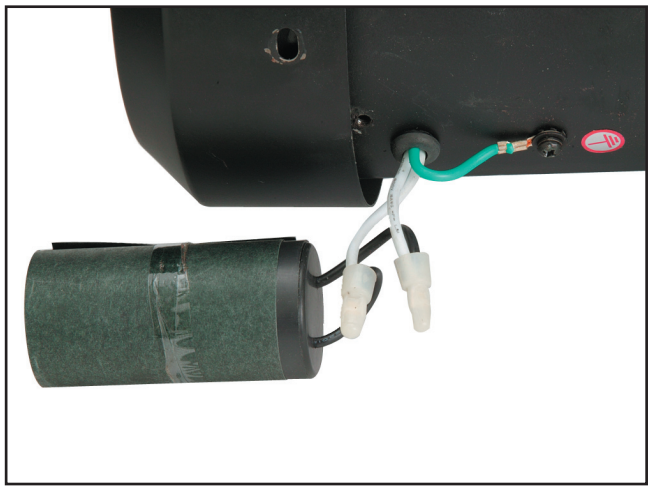


Figure 39. Motor connections.

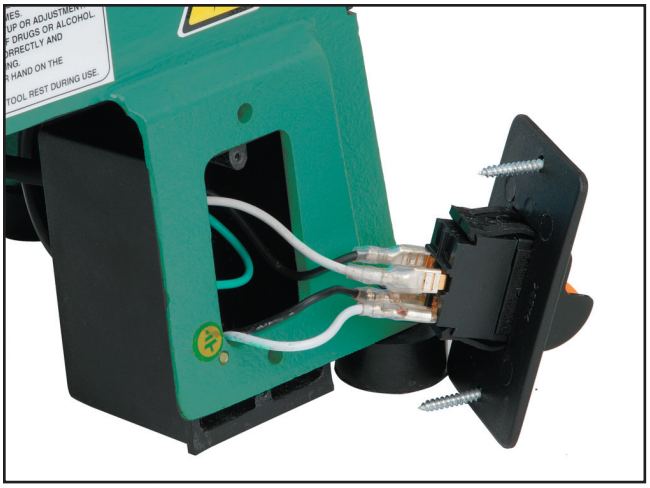
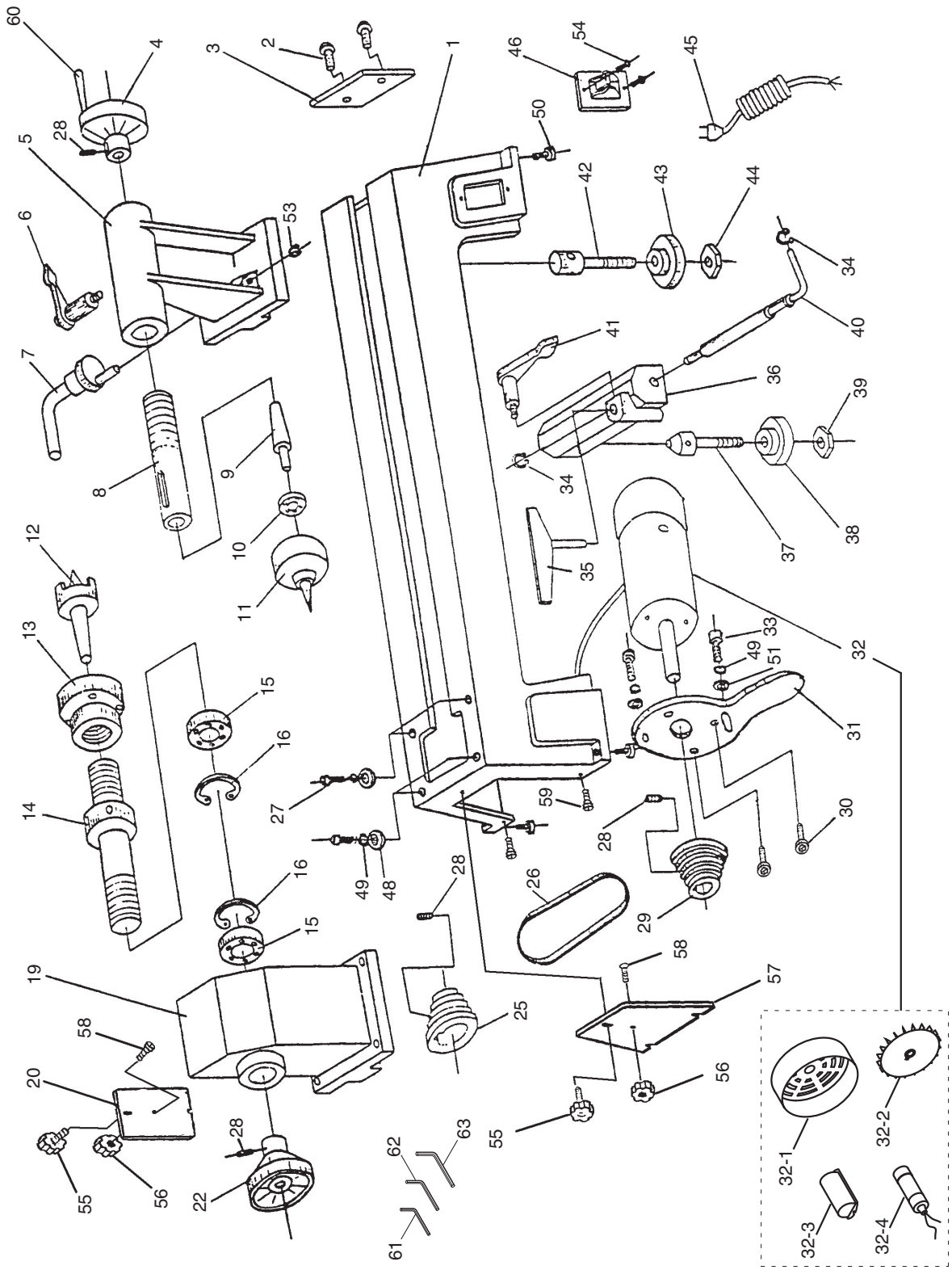


Figure 40. Switch connections.

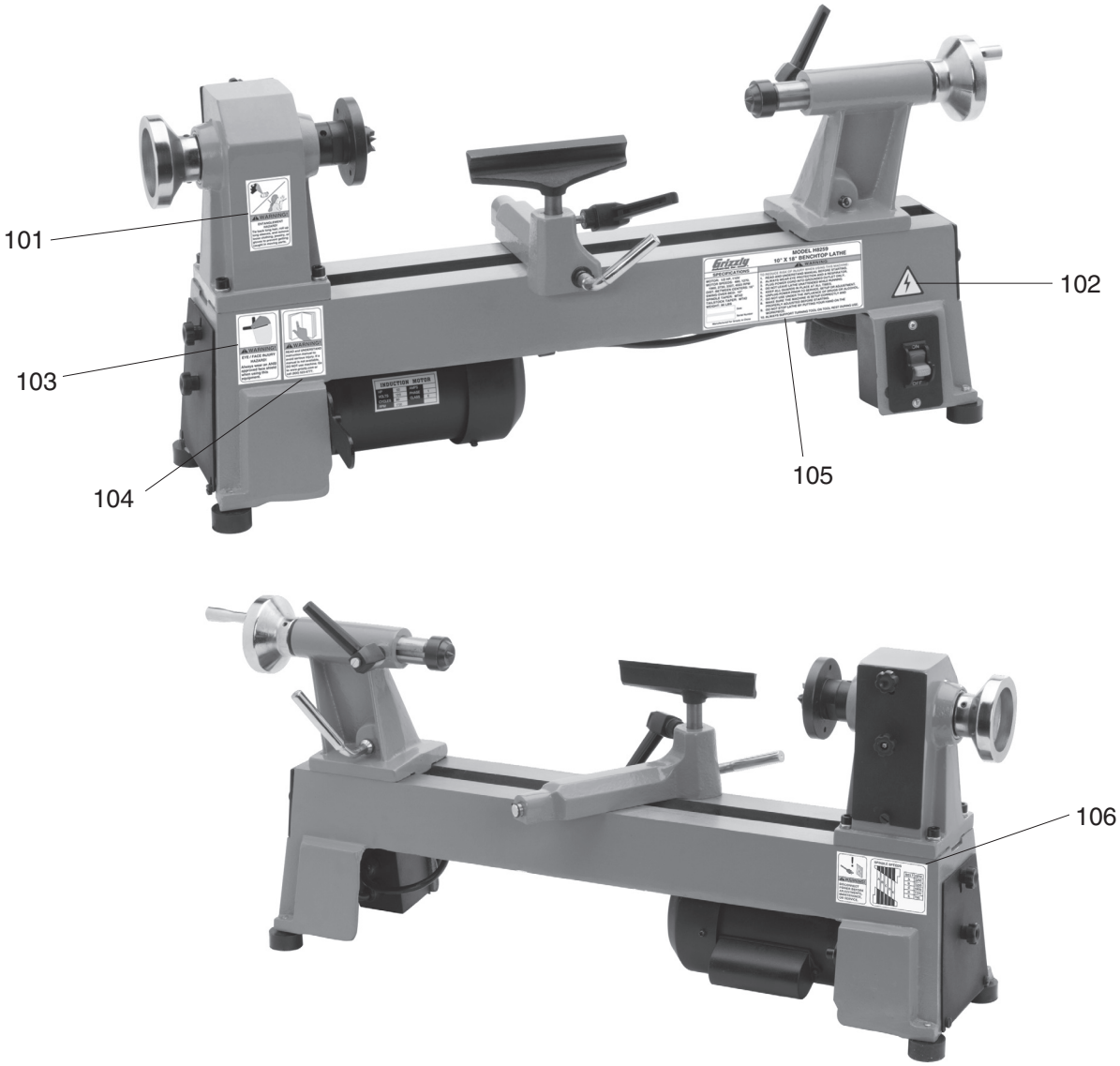
Main Breakdown



Main Breakdown Parts List

REF	PART #	DESCRIPTION
1	PH8259001	LATHE BED
2	PSB64M	CAP SCREW M10-1.5 X 25
3	PH8259003	RETAINING PLATE
4	PH8259004	QUILL HANDWHEEL
5	PH8259005	TAILSTOCK
6	PH8259006	QUILL LOCK LEVER
7	PH8259007	TAILSTOCK LOCK LEVER
8	PH8259008	TAILSTOCK QUILL
9	PH8259009	LIVE CENTER TAPER ROD
10	P6002	BALL BEARING 6002ZZ
11	PH8259011	LIVE CENTER
12	PH8259012	SPUR CENTER
13	PH8259013	FACEPLATE
14	PH8259014	HEADSTOCK SPINDLE
15	P6005	BALL BEARING 6005ZZ
16	PR25M	INT RETAINING RING 47MM
19	PH8259019	HEADSTOCK
20	PH8259020	REAR ACCESS COVER
22	PH8259022	HEADSTOCK HANDWHEEL
25	PH8259025	DRIVE PULLEY
26	PH8259026	ULTRA-FLEX BELT 7 X 4 x 625
27	PSB13M	CAP SCREW M8-1.25 X 30
28	PSS04M	SET SCREW M6-1 X 12
29	PH8259029	MOTOR PULLEY
30	PSB28M	CAP SCREW M6-1 X 15
31	PH8259031	MOTOR PLATE
32	PH8259032	MOTOR (1/2HP 110V 1750RPM)
32-1	PH8259032-1	FAN COVER
32-2	PH8259032-2	FAN
32-3	PH8259032-3	CAPACITOR COVER
32-4	PH8259032-4	CAPACITOR 24M 300V 35 X 65MM
33	PSB14M	CAP SCREW M8-1.25 X 20
34	PR47M	EXT RETAINING RING 13MM
35	PH8259035	TOOL REST
36	PH8259036	TOOL REST BASE
37	PH8259037	TOOL REST ADJUST SHAFT
38	PH8259038	SLIDE COLLAR
39	PLN05M	LOCK NUT M10-1.5
40	PH8259040	TOOLREST BASE RELEASE LEVER
41	PH8259041	TOOLREST LOCK LEVER
42	PH8259042	TAILSTOCK ADJUST SHAFT
43	PH8259043	SLIDE COLLAR
44	PLN04M	LOCK NUT M8-1.25
45	PH8259045	POWER CORD
46	PH8259046	SWITCH W/SAFETY KEY
48	PW01M	FLAT WASHER 8MM
49	PLW04M	LOCK WASHER 8MM
50	PH8259050	RUBBER FOOT
51	PW01M	FLAT WASHER 8MM
53	PR01M	EXT RETAINING RING 10MM
54	PHTEK28M	TAP SCREW M4 X 25
55	PH8259055	LOCKING KNOB M5-.8 X 10
56	PH8259056	KNOB HANDLE
57	PH8259057	SIDE ACCESS COVER
58	PFH01M	FLAT HD SCR M5-.8 X 15
59	PH8259059	SHOULDER SCREW M5-.8 X 10
60	PH8259060	QUILL CRANK HANDLE
61	PAW03M	HEX WRENCH 3MM
62	PAW06M	HEX WRENCH 6MM
63	PAW08M	HEX WRENCH 8MM

Warning Labels Breakdown & Parts List



REF	PART #	DESCRIPTION
101	PH8259101	ENTANGLEMENT HAZARD LABEL
102	PLABEL-14	ELECTRICITY LABEL
103	PH8259103	FACE SHIELD LABEL

REF	PART #	DESCRIPTION
104	PH8259104	READ MANUAL LABEL
105	PH8259105	MACHINE ID LABEL
106	PH8259106	SPINDLE SPEEDS LABEL

⚠WARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine MUST maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, REPLACE that label before using the machine again. Contact Grizzly at (800) 523-4777 or www.grizzly.com to order new labels.

Grizzly Industrial, Inc. WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. ***Of course, all information is strictly confidential.***

1. How did you learn about us?

____ Advertisement ____ Friend ____ Catalog
____ Card Deck ____ Website ____ Other:

2. Which of the following magazines do you subscribe to?

____ Cabinet Maker
____ Family Handyman
____ Hand Loader
____ Handy
____ Home Shop Machinist
____ Journal of Light Cont.
____ Live Steam
____ Model Airplane News
____ Modeltec
____ Old House Journal
____ Popular Mechanics
____ Popular Science
____ Popular Woodworking
____ Practical Homeowner
____ Precision Shooter
____ Projects in Metal
____ RC Modeler
____ Rifle
____ Shop Notes
____ Shotgun News
____ Today's Homeowner
____ Wood
____ Wooden Boat
____ Woodshop News
____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

3. What is your annual household income?

____ $20,000-$29,000 ____ $30,000-$39,000 ____ $40,000-$49,000
____ $50,000-$59,000 ____ $60,000-$69,000 ____ $70,000+

4. What is your age group?

____ 20-29 ____ 30-39 ____ 40-49
____ 50-59 ____ 60-69 ____ 70+

5. How long have you been a woodworker/metalworker?

____ 0-2 Years ____ 2-8 Years ____ 8-20 Years ____ 20+ Years

6. How many of your machines or tools are Grizzly?

____ 0-2 ____ 3-5 ____ 6-9 ____ 10+

7. Do you think your machine represents a good value? _____ Yes _____ No

8. Would you recommend Grizzly Industrial to a friend? _____ Yes _____ No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?
Note: *We never use names more than 3 times.* _____ Yes _____ No

10. Comments: _____

_____

_____

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WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

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